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Industrial Horizons

MONTANA—FRONTIER OF INDUSTRIAL OPPORTUNITY

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PETROLEUM REPLACES COPPER AS STATE'S NO. 1 MINERAL IN 1957

For the first time in Montana's history, petroleum surpassed copper as the state's most valuable mineral, according to preliminary estimates of Montana's 1957 mineral industry by the U. S. Bureau of Mines.

Value of copper mined in Montana dropped \$27.4 million from 1956 to 1957 from \$82 million to \$54 million. In contrast, crude petroleum production increased \$13.8 million—to a record \$69.9 million. Natural gas increased in value to \$2.1 million.

Despite the record petroleum production, total volume of Montana's mineral production dipped \$30 million (14 per cent) last year. In 1956 the state total was \$213.7 million; in 1957 it was \$184.0 million.

Much of the drop in value is attributable to lower prices on metals mined in Silver Bow County. While actual copper production declined only 6 per cent last year, its value declined 33 per cent. Total value of Silver Bow output of base-metal ores declined from \$111.1 million to \$71.9 million.

Given a good year in 1958, copper can be expected to be on top again.

Review by Commodities

• **ALUMINUM:** Production below annual capacity rate of 60,000 tons due to poorer market conditions.

• **BARITE:** Output by Baroid Sales Division, National Lead Company, was slightly below 1956 level. Products for use in rotary-drilling mud and by sugar refineries were made at the company plant near Greenough.

• **CEMENT:** Production decreased about 11 per cent from 1956 levels, which reversed the upward trend begun four years ago.

• **CHROMITE:** Daily ore production of about 1,000 tons per day continued in Stillwater County for government stockpile (total 1957 value: \$3,819,872).

• **CLAY:** About 13 per cent more was produced in 1957 than in 1956. This includes heavy clay products and bentonite.

• **COAL:** Production of bituminous coal and lignite was 375,000 tons, less than half the 1956 total.

• **COPPER:** Copper output, although down 6 per cent compared with 1956, was the second highest since 1944. During 1957 the major U. S. copper producers curtailed mine output and reduced prices in an effort to bring supplies in line with reduced demand.

• **FLUORSPAR:** An increase was reported. Cummings-Roberts, operator of the Crystal Mountain mine east of Darby, announced plans for a beneficiation plant that would be ready for operation late in 1957.

• **GOLD:** Output dropped because of a lower recovery from gold mines and curtailed Butte copper and lead-zinc operations, which normally produce about 80 per cent of the state's gold as by-product.

• **GYP SUM:** Production dipped 15 per cent below 1956.

• **IRON ORE:** Small production continued from mines in Judith Basin and Broadwater Counties. A new deposit was discovered near Dillon.

• **LEAD:** Mine lead production was the lowest since 1946 due to reduced output at Butte, where 73 per cent of the state total was produced in 1957, as compared with 80 per cent in 1956.

• **LIME:** A substantial increase of 30 per cent was recorded. The Anaconda Company and Elliston Lime calcinated limestone to produce quicklime.

• **MANGANESE:** Output of manganese ore and concentrate decreased again in 1957.

• **PHOSPHATE ROCK:** Estimated output reached 574,000 tons valued at \$4.1 million. Montana Phosphate Products Company (Powell County), Victor Chemical Works (Beaverhead and Silver Bow Counties), and J. R. Simplor Company and George Relyea (Beaverhead) contributed to the production. The Anaconda Company ammonium phosphate plant was completed in 1957.

• **PYRITE:** Tailings continued to yield pyrite for use in sulfuric acid manufacture.

• **SAND AND GRAVEL:** Slightly below 1956 level. In 1956, 78 per cent was used for road material, 13 per cent for building, and 9 per cent for other applications, including railroad ballast.

• **SILVER:** Production of silver was the lowest in 12 years. Byproduct silver from Butte accounted for most of the state total (5,114,050 troy oz., yielding \$4,628,474).

• **SULFUR:** Recovery of high-purity elemental sulfur by Montana Sulphur & Chemical Company at Billings from refinery gasses increased about fourfold.

• **TALC:** Talc mined in Beaverhead and Madison Counties was expected to exceed 1956 production. Montana talc was marketed nationally for use in ceramics, paints, paper, textiles, and rice polishing.

NINE PLANNING GROUPS NOW IN OPERATION

City planning is becoming an important part of Montana's governmental picture.

Since the new enabling legislation went into effect last July 1, nine official city-county planning boards have been formed, according to information received by the State Planning Board:

| Board | President |
|---------------------|--------------------|
| Billings | Eimer C. Nielsen |
| Bozeman | Harold Korslund |
| Butte | T. S. Veazey, Jr. |
| Glencoe | E. P. Holm |
| Great Falls | H. Cleveland Hall |
| Kalispell-Whitefish | |
| Columbia Falls | Charles L. Hash |
| Livingston | Richard A. Beulke |
| Missoula | Vernon R. Peterson |

In addition, three other boards are in the process of being formed—Glasgow, Havre, and Helena—and four other cities are actively considering setting them up—Lewistown, Libby, Miles City and Sidney.

Thus, nearly every Montana city with significant growth problems is striving to channel this growth into desirable paths by taking advantage of the city-county planning law passed by the last legislature.

• **TUNGSTEN:** Following suspension of the government purchase program, Minerals Engineering Company terminated its Beaverhead County operations. About 90 men, including work crews and engineering staff, were affected.

• **URANIUM:** An undisclosed tonnage of uranium ore was shipped from the Pryor Mountains.

• **ZINC:** A sharp drop of 29 per cent was recorded in zinc production, the lowest in 11 years. About 90 per cent of the state total comes from Butte mines and East Helena slag recovery.

• **VERMICULITE:** Output was the same as in 1956.

• **PETROLEUM AND NATURAL GAS:** Production of crude petroleum increased to 27.1 million barrels. During the first ten months of 1957 exploration and drilling lagged a little behind the same period in 1956, while the discovery rate remained about the same. The flow of crude from four wildcat wells in the Williston Basin was believed to mark 1957 as one of the best exploratory years since the initial discovery.

Recovery of natural gas advanced to 30.7 billion cubic feet.

Livestock Feedlots Source of Growth Potential

Feedlots for fattening cattle, sheep, and hogs, represent a good potential for industrial growth in Montana communities.

As the article reprinted on page 3 points out, population growth on the West Coast has given Montana cities a wonderful opportunity to keep some of the wealth which normally goes to the Midwest.

The first person to contact about a community-organized feedlot operation is your County Agent. Other valuable contacts include the Extension Service at Montana State College, and the agricultural agents for the Northern Pacific, Great Northern, or Milwaukee Railroads.

Follow the advice of Mr. Simard of Bainville. Visit other feedlots in Montana. A very tidy little enterprise is bound to result.

How We Started a Feedlot In Bainville

By John Simard, Treasurer
Little Muddy Livestock Feeders' Cooperative
Bainville, Montana

Ed. Note—This is a good example of community initiative resulting in a new economic enterprise. Little Muddy Co-op was incorporated in April of 1957 by ten stockmen, each buying a \$2,500 share. They now have a physical plant worth about \$40,000, and plan a year-round operation with a capacity of 2,000 head per cycle. Recent word received from Mr. Simard indicates that the first batch of cattle fed at the feedlot was recently butchered in Fargo, and that the quality of the meat was considered excellent for the feeding period involved (100-120 days). Mr. Simard concludes: "I might suggest that you should not be surprised if this packer in Fargo has us doing some feeding for him in the future."

On a trip to the Wool Growers Convention in Billings in 1956, Albert Nelson, William Harmon, and I got to kicking around ideas of how a small-town community could better itself. We came up with the idea that a feed lot would be about the best idea for anything along the industrial line, as it could be started and operated by rural folks like ourselves.

From there on we started a thorough and systematic search for layout ideas by going into Idaho and checking some large feed lot operations. We wrote to dozens of others in California, Colorado, Arizona, Kansas, and Nebraska. Naturally, we made personal checks of all large feed lot operations in Montana as well.

We started out with the idea of incorporating for a large enough sum to handle the operation of a complete plant, including processing our own feed.

Pellets from Sidney

We started coming up with a lot of startling facts about gains on pellets, and without trying to go into this angle here, I will simply say we decided against our own processing plant—at least for the first year. We made a rather attractive price agreement with Occident to pellet complementation for us. The feature of this deal is much construction and a lot of extra to purchase feed all day of time. But a firm order and agreement with the Occident Mill & Scales, which they provided for the feed, was made. On the basis of this agreement, we have been able to keep our feed costs down to a minimum.

There were two things, though, when we were quite worried about when we would get the next load of pellets. Now we have our own overhead bin in the mill at Sidney, and we can drive in at any time and get our load.

We all pitched in right after harvest this year and started our construction work, after first forming our organization as a cooperative, incorporated under Montana law. We blueprinted the main or basic parts of the yard such as feed troughs and self-feeders, size of pens, water layout, etc.

Help From Community

The finer details we worked out with the help of drawings from the Bainville Chapter of the FFA and others. We have the feed bunks around the outside of the lot and the cattle or work alley is in the center. There are six 120'x160' pens on each side of the work alley. We added another pair of 120'x160' pens and these were split up into smaller starting and cutting pens. Our close cutting and sorting alley is just north of these pens and is built in such a manner that either incoming or outgoing cattle can be sorted and weighed through the scale from two directions.

Our water layout is plastic pipe buried seven feet deep and serves all our tanks on both sides of the work alley by being laid out in a figure H.

We all feel that we are about a year ahead with our plans by constructing as fast as we can. But it does have the disadvantage that some of our members who wish to feed their calves, find themselves in the position of no cattle in the yard during the winter as they wish to grow them out on the ranch until about March when the weather is more favorable.

We are feeding 700 head now, and all are on full feed, which means, of course, that they have pellets before them at all times.

Most feeders advocate from 100 to 200 square feet per animal. Using the minimum figure, our yard will hold about 2,700 head and using the maximum figure, it would nicely hold about 1,450 head. We split the difference and call it a 2,000-head yard. We think the figure of 150 square feet per animal is about right for winter feeding, but in summer it would easily be crowded some.

We are using the mound system for our bedding, which means we are building a manure pile in the center of each pen which we hope will create some heat for the cold months.

Barley Pellets

Our cattle belong to the members themselves and they can sell and replace as they wish. We charge 35¢ per head per day for calves up to 600 pounds and 45¢ per head per day for yearlings up to 1,000 pounds. We realize, of course, that these figures are subject to change on the

DIRECTORS' MEETING: Little Muddy Livestock Feeders' Cooperative, Bainville



Left to right, seated: Duwayne Simard, Secretary; Albert Nelson, President; William Harmon, Vice-President; Otto Habedank, Attorney; John Simard, Treasurer. Standing: Nolan Harmon; Roe Wilson, Edwin Hansen, Fred Martin, and Lavern Picard; Directors: James Martin.

price of the feed ingredients. Our basic pellet now consists of 30 per cent alfalfa hay, 50 per cent barley, and 20 per cent dried beet pulp, plus the additives of dynafac and trace minerals. We are thinking of cutting our full feed pellet to 20 per cent hay and adding barley to replace it. Later we intend to feed several small pens of cattle on different combinations of pellet ingredients to more nearly ascertain just what we can expect the fastest gain to be, figured against the cost per cwt. of gain.

We certainly want to thank all those who have helped us with our problems. The County Agent's office for Roosevelt County has been most interested and helpful.

Benefits to Community

We hope we are creating a market for our locally-grown barley and hay; and we know that if we get our yard filled and keep it filled, it will have considerable impact on our local economy. Above all, we hope we can help other communities see the possibilities of a joint venture

(Continued on page 4)

SHIFT TO WEST COAST MARKETS

Hogs are being shipped to the West Coast from Minnesota now. Cattle and calves from as far east as Miles City are being shipped west. Sheep and lambs from as far east as Billings find their market near the Pacific.

Not long ago, livestock producers in Montana looked to the heavily populated East for a market. Now they must change their sights and concentrate on satisfying customers to the west.

Freight rates will still be important, because Montana continues to be farther from the consumer markets than any other producing state for all livestock except hogs.

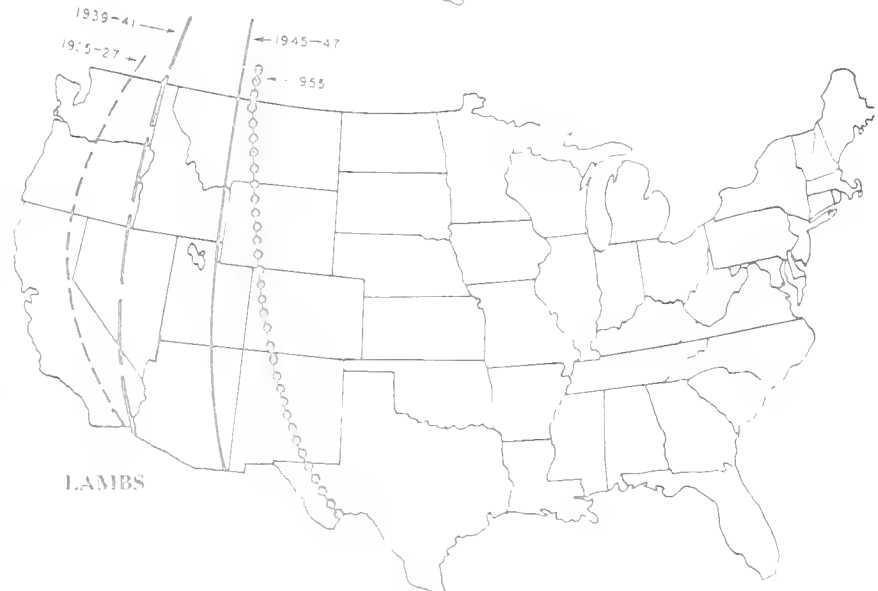
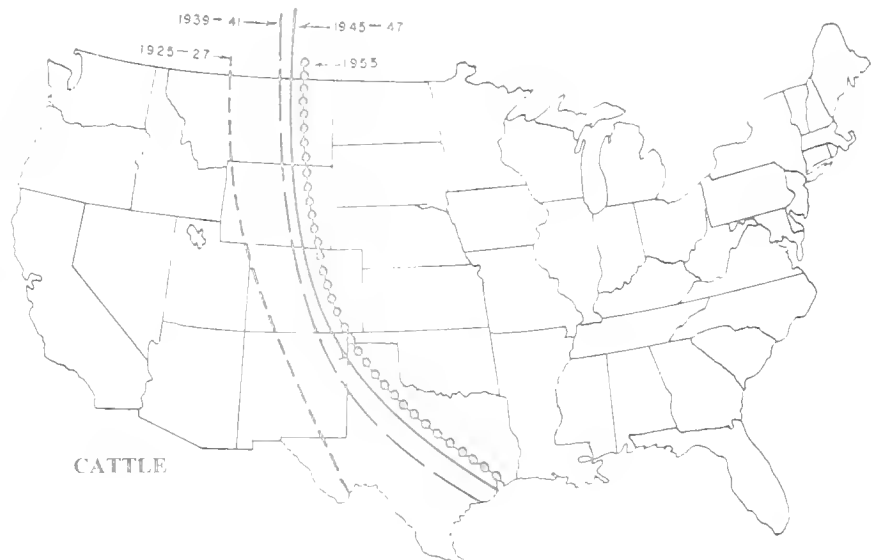
Does this suggest that Montana may have an economic advantage in the production of hogs, since these animals are shipped through the state as far east as Minnesota? Small grains are well adapted to the production of bacon-type hogs. And these grains are produced in abundance in Montana.

There is no corn belt on the West Coast. Does this suggest an opportunity for enlarged cattle feeding operations in Montana? Again, the grains produced in such abundance in the state may be well suited to producing the kind of beef consumers on the coast prefer.

Farmers and ranchers should be alert to the kinds of preferences consumers to the west have. There is no doubt but that the future markets for Montana livestock will be on the West Coast. Those farmers and ranchers who produce the kinds of animals preferred there will be the ones who show the greatest profit.

—from "Montana Agriculture Basic Facts," Agricultural Experiment Station and Extension Service, Montana State College, Bozeman.

LINE OF BALANCE BETWEEN EASTWARD AND WESTWARD SHIPMENTS OF MONTANA LIVESTOCK



—Maps courtesy Agricultural Experiment Station

Most of New Industry Starts With Local Idea

Two-thirds of new manufacturing establishments in Colorado since 1947 came from within the state rather than from without.

This information was developed by a survey of 253 new Colorado industries conducted by the Bureau of Business Research at the University of Colorado and published as *Industrial Location Survey: Why Did You Come to Colorado?* (1957). The study involved a detailed questionnaire sent to 693 new Colorado firms. It was planned and financed by a committee of Colorado businessmen and research people.

Half by Local People

Over half of the 253 were new businesses started by Colorado residents and Colorado capital. Another two per cent were new businesses started by former residents coming home. This means that 55 in every 100 manufacturing establishments selecting sites in Colorado during these recent years were the direct result of Colorado ideas leading to the establishment of a new company.

To this 55 may be added eight which were plants relocated from other Colorado areas, and two which were new branch plants with a Colorado home office.

Thus, 65 in every 100 plants selecting Colorado sites were, in fact, native to the state. The other 35 were outside firms establishing a branch plant in Colorado.

Markets Important

Nearly 75 per cent of the 253 new plants considered one or more market factors as important to their site location. In general, the study concludes that the following types were seeking LOCAL MARKETS, both present and anticipated: food products, printing, and stone, clay and glass products.

Seeking STATE-WIDE OR AREA MARKETS were lumber and wood products.

- 7. We are power-machinery minded, making feeding a very simple job.
- 8. Wheat farmers need vertical diversification to broaden their margins.
- 9. Stockmen can derive benefits from a stronger calf market or more competition from eastern bidders.
- 10. There is a satisfaction in helping yourselves and deriving monetary benefits at the same time.

Like any business, it will take good management and we can only hope we are able to shoulder our part of it.

pets, furniture and fabricated metal products.

Over 60 per cent of sites in Colorado in the pipe, machinery and scientific instrument industries were seeking to serve NATIONAL OR REGIONAL MARKETS.

Other factors considered by new Colorado manufacturers included availability of product or materials, labor supply, climate and living conditions.

Same Problem in Montana

Bringing new industry to Montana has many of the same problems as bringing them to Colorado—distance from markets, with consequent high freight charges; small population; raw material oriented economy.

It is significant that most of the new business in Colorado started from a local idea.

Montana communities should apply this fact to their own industrial development efforts. How can local inventors be helped to bring their ideas into production? How can local firms be helped to expand into state-wide and regional markets?

BRIEFS

The State Rural Development Committee has approved Lake County as the second pilot county in Montana. Ravalli was the first, selected last fall. The program is designed to coordinate all development efforts in low income farm areas. Further information is available from John Bower, State Extension Service, Montana State College, Bozeman.

Perry Roys, director of the State Planning Board, is to be a panel speaker along with other industrial development people from the Pacific Northwest, British Columbia and Alaska at the annual Spring Conference of the Pacific Northwest Trade Association. The conference is to be held in Spokane, April 20-22, and its theme is "More and Better Jobs for the Pacific Northwest." PNFTA is a private organization working for better trade relations between the Canadian Northwest, American Pacific Northwest and Alaska.

The Anaconda Company's lumber mill at Bonanza cut 60,791,667 feet during 1957, according to company officials. The new mill mill produced 11,071,907 feet of lumber, 100,000 board feet of mill operations contribute to the community. The mill is one of the country's largest, as is the U.S. Lumber, in 1957.



Laying pipe for a new well outside the Little Muddy feedlot. The well is being dug both for later expansion and as insurance for the present supply.

BAINVILLE FEEDLOT

(Continued from page 3)

such as this, and eventually have enough feed yards in Montana to become known as a feeder state as well as a stocker state.

We are not yet able to tell how our marketing will turn out. We hope to be able to interest buyers in coming right to the yard and buying direct from us, but that will have to be worked out. This particular possibility is one of the main ideas behind doing this job together, rather than each of us building our own yard on our ranches.

We know we will get lots of good help from others and that we will learn much as we go along. We have already derived considerable personal satisfaction as members of our venture by seeing the interest shown by people from many different towns and communities.

Main Factors

In closing, let me point up a few of the main factors of the venture:

- 1. We raise good cattle in Montana.
- 2. We are centrally located between two large population areas.
- 3. We can and do grow feeds cheaply.
- 4. Five thousand calves averaging 400 pounds fed out to 1,000-pound steers should leave over \$500,000 to buy feed from locally grown products and make a margin of profit for the feeder.
- 5. We have a lumber industry from which to buy our building needs at a fair price.
- 6. We have main-line railroads and highways to our markets either east or west.

MONTANA STATE PLANNING BOARD

Sam Mitchell Building

Helena, Montana

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